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ABSTRACT

Written to accompany a videotape, the handbook is presented as a guide for school psychologists on peer tutoring in the regular classroom. A general overview of the peer tutoring process (including selecting and pairing students, supervising the process, and scheduling and feedback) is presented, followed by basic steps in developing a tutoring program and preparing tutors. Training goals are listed in terms of the development of ten skills: put the learning partner at ease, clarify the learning expectation, show the learner how to verify answers, direct the learner on response procedures, provide feedback contingent on responses, help the partner to verify the response, avoid punishment, provide verbal praise when appropriate, provide tangible rewards when appropriate, and evaluate all elements of mastery on designated problems. Implications for special educators are discussed, and references and recommended readings are appended. (JW)

School Psychological Services

Iowa Department of Public Instruction

PEER TUTORING IN THE REGULAR CLASSROOM

A Guide for School Psychologists

Stewart Ehly

School Psychology Program University of Iowa

A Project Supported by The Department of Public Instruction

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PREFACE

Peer tutoring is a strategy being increasingly used with children in both special and regular education. The widespread use of tutoring has allowed a number of students to experience both academic and affective gains. School psychologists responsible for suggesting remedial programs can suggest tutoring as one alternative for strengthening children's development.

This handbook has been developed to accompany a videotape on peer tutoring methods and strategies. Both the handbook and tape have been developed with the support of the Department of Public Instruction, State of Iowa. Jeff Grimes, consultant for school psychology, initiated and supported the project. Special thanks for the completion of project activities goes to Ron Osgood, coordinator of the Video Production Lab, University of Iowa, and his staff.

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SUMMARY OF VIDEOTAPE

A one hour videotape has been developed in conjunction with this handbook. The name of the tape is "The Role of the School Psychologist in Developing and Implementing Peer Tutoring." The tape contains narrative directed at school psychologists who are considering academic or affective interventions with children. The episodes on the tape depict a variety of circumstances involving teachers and children working together in peer tutoring programs. Individual segments of the tape are illustrative of the range of teacher/student and student/student exchanges. Through viewing the tape, psychologists are encouraged to consider peer tutoring as a recommended strategy for classroom programming.

The videotape contains the following materials:

1. An introduction and overview of peer tutoring;
2. An overview of the goals of peer tutoring;
3. Children who benefit from peer tutoring--the tutor and the learner;
4. Teacher/staff benefits;
5. Developing a tutoring program--

    Getting started

    Finding people resources

    Setting goals and objectives

    Choosing and pairing students

    Training tutors

    Developing materials

Composing session format

Monitoring students

Evaluation of process and product;

6. The importance of training--elements of successful training programs

7. Summary of tutoring process--how to implement programs for optimal impact.

Individual segments of the videotape can be used to show teachers and students how to conduct elements of the peer tutoring program. Administrators could also benefit from viewing the tape in considering alternatives to traditional academic arrangements. The text that follows is intended to stand independent of the videotape, but is, however, a valuable supplement to the content of the videotape.

SCHOOL PSYCHOLOGISTS AND PEER TUTORING

The role of the school psychologist in public education is primarily one of a resource linker. With an extensive knowledge of the psychological and educational needs of children, psychologists are the professional best prepared to alert teachers to programming options for children. While many psychologists engage in assessment of children, an important follow-up of assessment is the identification of remedial instruction. One attractive alternative to consider for remedial programming is that of peer tutoring.

Many psychologists who engaged in consultation with teachers, independent of assessment of children, also can consider peer tutoring as an activity of benefit to children. Recent evidence (to be discussed later) has shown that peer tutoring benefits both tutor and partner in learning academic materials. Under certain conditions, both children can also benefit socially and emotionally. As consultants, psychologists have the option of identifying any of a number of programs for teachers and students. The benefits of tutoring are such that many teachers already may engage in limited tutoring. If so, the efforts of the psychologist can be devoted to enhancing both process and products from tutorials.

Heightening the relevance of the tutorial option is increasing placement of children with special needs into mainstream classes. Such children may have a history of involvement in special education programs, but because of improvements in their performance or of decreases in

services, they are enrolling in increased numbers into traditional classrooms. When such placements occur, teachers are especially open to suggestions about classroom programming. Peer tutoring, with its proven successes, is an often used strategy for involving children of diverse abilities. The school psychologist can play an important role in helping identify resources in a school which can be devoted to a tutoring effort. By linking interested teachers and students with available materials, the psychologist can improve the chances of a tutorial program being successfully implemented.

While the psychologist may be an advocate of tutoring, he or she may have little working knowledge of the dynamics of tutoring. The hundreds of studies that have been recorded on tutorials serve as a rich bank of information on the do's and don'ts of peer tutoring. By understanding the limitations as well as benefits of peer collaboration, the psychologist can promote successful learning while motivating teachers to continue tutorials after trial efforts. The following sections of this text document the options available within tutorials while spelling out elements associated with past successes.

Discussion of peer tutoring is structured in the following sections to provide a general overview of tutorials for readers unfamiliar with the process. More experienced psychologists can skim the materials and focus instead on two major segments, "Basic Steps in Developing a Peer Tutoring Program," and "Preparing Tutors." A final segment emphasizes the development of tutorials for special needs students, looking closely

at modifications needed to enhance tutoring outcomes. Finally, recommended readings on peer tutoring are listed.

General Overview

Contemporary education has, in the last decade, witnessed changes in both administrative structure and instructional philosophy. Administratively, these reforms have been manifested in the establishment of more and varied services for a greater number of students. Philosophically, the emphasis has shifted from instructional methods appropriate for the individual. Formerly regarded as impractical, individualized instruction has now become an accepted and practical concept (Stephens, 1970).

As one consequence of these reforms, the teacher - both in the regular class as well as in special education - must play a more accountable role in regard to each student's achievement. The teacher, whether his or her pupils are classified as normal or educationally handicapped, is being held increasingly responsible for each child's success or failure. The assumption is no longer made that the child is unable to learn; rather, the method or approach to instruction chosen by the teacher is viewed as inappropriate.

The attention being focused upon the teacher as a professional held increasingly accountable for pupil's school achievement suggests that the traditional approach to instruction may need to be modified to ensure each student's success. One approach which has been demonstrated effective in enhancing student performance is that of peer tutoring.

What is Peer Tutoring?

The act of one child assisting another in the learning of a specific task has its roots in antiquity. In American history, older students in one room school houses frequently helped younger students with their lessons. In the 1960's, programs utilizing the child-helping-child concept were developed more systematically and implemented on a large-scale basis. The term "peer tutoring" was created to label the individualized instruction of one student by another. When a child assists and attempt to teach a school-related subject to another child, peer tutoring is in progress. The child who acts as the tutor is frequently older or the same age as the child being tutored (from here on called the learner). The infrequent occurrence of a younger child acting as a tutor may take place when the learner is enrolled in a special education class. In instances where the younger child is placed in the instructional role, the age difference is often kept to a minimum to avoid embarrassment and frustration on the part of the child being tutored. The case of two children of differing ages being involved in an instructional arrangement has been labelled more specifically as cross-age tutoring.

Certain authors have placed peer tutoring within a broader continuum of activities in which students help other students. Gartner, Kohler, and Riessman (1971) report observing not only one-to-one interactions but also tutors working with small groups, acting as "big brothers" or "big sisters" to other students, and assuming a variety of roles responsive to the academic and affective needs of their peers. The student is an educational tool with far-reaching potential. To illustrate this point one only needs to be aware of

some research into the tutoring phenomena. Thomas (1970) studied the tutoring behavior of college-aged tutors and fifth and sixth grade tutors working with second grade students in reading. Even though the college students were senior education majors enrolled in a reading method course, the fifth and sixth grade tutors were just as effective in producing reading gains with the second graders. The author noted, however, differences in the behaviors of the two groups of tutors. The college students spent time trying to coax the children into practicing the reading skills. In contrast, fifth and sixth graders were more direct and business-like. They accepted the fact that the second graders were having reading difficulties. Tutoring sessions were for teaching partners, using the materials provided by teachers, and not for discussing maters outside the lesson plan. Adults may have a negative expectation about children's interests in learning activities and inhibitions about remedial work with "slow learners" that children do not have. Children tend to see teaching and learning as normal, expected activities that do not require explanation or apology.

Large school systems were among the first to implement extensive peer tutoring projects with children in regular classrooms. Mobilization of Youth in New York City was one such project which was initiated in the early 1960's. This project, which utilized older students tutoring in reading, reported gains for both learners and tutors. Several other educators have reported learning gains for both of the children in a tutoring pair. Peer tutoring, thus, can benefit not only the

academic performance of the child being tutored but also the child who is acting as the instructor.

One question which may be asked by teachers is why should I go to the trouble of initiating a peer tutoring program? Of what possible benefit will it be to my students? In many instances the tutors need not be the best students. For example, a child may be selected as a tutor because he is a learning disabled child who has competency in one or more basic subject areas. When given the opportunity to assist a younger or "slower" child in an academic or social skill, a learning disabled child will be able to feel a needed sense of success as well as practice his skill in the area under study. Again, schools utilizing such programs have reported increased academic and/or social competence for both the tutor and the child being tutored. Consequently, the child needing and receiving help might be the child who is tutoring, the child who is tutored, or both children.

The side effects of peer tutoring are, in many instances, very positive. Perhaps the greatest benefits to be derived revolve around the emotional and psychological experiences of the participants. The prestige gained by the "problem child" becoming a teacher is frequently incalculable. With this prestige comes the opportunity for the child to model teacher-approved, socially appropriate behavior. The child's self-esteem will generally be boosted. He feels worthwhile. He is likely to feel needed and to gather evidence and increased confidence that he can finally perform a job well. It is likely that this new confidence will positively influence the child's sense of adequacy and, subsequently, his behavior in the classroom.

The child who is being tutored also profits from peer tutoring. The child is receiving help from someone who is older or more knowledgeable. In most cases, the child will be more relaxed with the peer tutor. The academic and/or social gains from the tutoring can heighten confidence so that the child can return to the classroom with a determination to work harder.

Initiating the Tutoring Program

The teacher with the independence, time, and motivation to develop a peer tutoring program will need to take into account several procedural factors before starting. The sp-cific factors fall under the following categories:

- the teacher (or teachers)
- school resources of space and materials
- the students to be tutored or who will serve as tutors.

The main assumption is that a teacher can successfully initiate the act of students tutoring other students within a classroom. If possible, several teachers at different grade levels should cooperate in formulating a tutoring program within their school. After a group of teachers has joined together, an active attempt should be made to seek administrative backing in allotting materials and space where tutoring can be conducted. To begin, small scale programs can take place using sectioned-off corners of classrooms, learning stations, closets, and similar spaces. With administrative support, requests for additional space and materials will be more likely to be granted. School psychologists can assume a valuable role by coordinating teacher efforts, structuring tutoring centers, and evaluating trial efforts.

In most instances, materials utilized in the tutorial process are developed for the specific situation in which they will be used. The materials may be teacher-made or developed by the students who will be acting as tutors. Teacher-made materials insure that the tutor will cover essential learning areas with the tutee. Tutor-developed materials have the advantage of increasing potential learnings for the tutor. The tutor will learn from structuring materials and lesson plans, as well as learn how to present them effectively to the tutee. Learning by reviewing and by reformulation of the material can occur for the tutor.

Selecting and Pairing the Students

The Tutors

Teachers who are attempting to develop a tutoring program within their own classrooms can usually ask for volunteers for tutors, or they can choose students with particular academic strengths. Teachers who initiate programs with tutors who are older than the children to be tutored need to determine which students will serve as tutors. To begin with, guidelines for selecting students to train as tutors vary widely. Teachers may choose:

- students who excel in their school work and are also well-behave-
- all students who volunteer
- students who are well-behaved but have some academic weakness.

Every student has something to contribute and to gain from his or her experiences as a tutor, if proper training, supervision, and followup is part of the tutoring program's activities. The teacher, however,

needs to be sensitive to the limitations of the students who are available to participate. Emotional and behavioral inconsistencies may rule out the student who otherwise has the academic credentials to tutor. It is same to say that if due consideration is not given to this stage of the activities, the program will probably fail. School psychologists can advise teachers on perceived strengths of students in tutor or learner roles.

Choosing the Learner and the Pairing Process

When choosing children to be tutored, a teacher may wish to focus upon those students exhibiting any of a number of academic weaknesses. Problems in reading and arithmetic are a common focus in tutoring, but programs in social studies, science, physical education, or any subject area in which students need remedial instruction can be developed. A practical guideline in selecting learners is that while a student can profit academically from being tutored, not every student has the internal control to work well over a period of time in a one-on-one relationship. Be aware of a student's abilities to cope with an individualized, remedial situation. Remember, the learner will be working intensively over many sessions with another child. Past experiences with the potential learner will help predict the likelihood of successful adjustment of the child to a structured, intense learning situation.

Again, the teacher who knows his or her students well will be able to match children in the tutoring dyad by recognizing the cognitive and affective strengths of the tutor and the needs of the learner.

Pairs which do not "work" in terms of achieving learning goals or of the ongoing dynamics can be reassigned to new, more compatible, partners.

Training the Tutors

The amount and nature of training for the tutor varies with the teacher and the requirements of the tutoring program. The teacher needs to consider time, space, and materials available to devote to training. Selection or development of materials is a consideration when the teacher chooses to use his or her own resources in the school. When students are encouraged to develop materials, teacher guidelines and monitoring will help the student to focus on the needs of the tutees while planning lessons. Tutors should be acquainted with the goals of the program, as well as the learning goals for the learner.

The philosophy behind the structuring and goals of the tutoring program similarly dictates the training provided for the tutor. Some program directors have argued that students tutor best when given minimal training. Other programs have utilized extensive training in academic content and personal-social skills useful to the tutor. Programs have varied in the number and type of reinforcements given to the tutor, as discussed below, and in the sequencing of learning steps within the program. The sequence in which materials are presented is an important consideration in the tutoring process. Blumenfeld (1973) has given examples in planning instructional sequences in a lesson and from session to session. The emphasis is on discovering what the learner knows, training him or her in retention of that skill. The following is an example of how a tutoring objective as a sequence of individual learning steps was used in a classroom.

Billy was a second grade child who had experienced great difficulty in mastering basic reading skills. His failure had reached the point where he was beginning to withdraw when in the classroom and come into conflict with his peers when in the lunchroom and on the playground. His teacher, Miss Jackson, was convinced that Billy could learn if given some intensive one-to-one remediation. She believed that while she had time to devote to this task after school, her efforts would only serve to reinforce Billy's feeling of failure. In addition, the after school work could place her in the difficult role of disciplinarian which would interfere with other interaction she was planning to initiate with him.

As an alternative action, Miss Jackson called upon one of her former students. James had been in Miss Jackson's room two years ago, and while not being an outstanding pupil, he always seemed to be sensitive to his classmates' problems. After gaining permission from James and his teacher, (and explaining this idea to Billy), Miss Jackson arranged for three, twenty-minute sessions per week during which Billy would be presented appropriate lessons in reading. After carefully reviewing Billy's academic skills, Miss Jackson delineated an instructional goal and several subskills which relate to that goal. Once she was sure that James understood the steps of the instructional sequence, the program was initiated.

Instructional Goal: To assist Billy in identifying the initial consonants.

Subskills (to be emphasized by the tutor):

Step 1. Billy will be able to listen to the tutor as he pronounces words which have a specific initial consonant.

Step 2. Billy will be able to clap his hands each time that he hears a word that starts with a selected initial consonant as the tutor pronounces a group of words.

Step 3. Billy will be able to put an X on the picture which is below the vocabulary word that begins with a selected initial consonant, given two stimulus pictures.

Step 4. Billy will be able to sort a group of pictures according to a specific initial consonant in the named objects.

Step 5. Billy will be able to say words that begin with a particular initial consonant.

At the conclusion of two weeks (a total of six sessions), Billy demonstrated mastery of the given subskills and attainment of the instructional goal. Miss Jackson decided to program additional skills and encouraged James to continue the warm supportive atmosphere which he had created for the tutoring sessions. At the conclusion of the school year, Billy scored only four months below the mean reading level established by his class on a traditionally administered achievement test. His behavior in school had become more outgoing and fights with classmates had lessened markedly. Billy's parents had noticed that he was much more relaxed at home since the tutoring program initiated.

The child's ability to intellectually grasp individual steps in an instructional sequence sets the pace for the learning process. Tutors need to be made familiar with the elements of the tutoring program and the materials needed at each step. The tutor must also be taught to be sensitive to the partner's ability to assimilate information at every point in a tutoring sequence.

Supervising the Process

Students should be encouraged to come to their teachers with questions and concerns throughout the duration of the tutoring program. While tutors need to feel free to do this, the teacher must be aware of and in control of the progression of the program. Are the program's goals being met? To answer this question, the teacher needs to monitor several processes, presented her in question form:

- Are the tutoring sessions occuring on schedule?
- Are the materials being used appropriately?
- Are the tutor and learner working well together, without friction?

While teachers vary in the amount of supervision they believe is necessary with individual children, a rule of thumb is to observe one in every three sessions to check on the functioning of the tutoring pair.

Scheduling and Feedback

Tutoring programs vary widely in the length of time they extend into the school year. Number and length of sessions per week likewise vary, depending upon the particular situation. One common finding reported by teachers is that more important than the length of a tutoring program or an individual session is the regularity and consistency of meetings of the tutoring pair over the term of the program. Once a schedule is established, stick to it. Stress with the tutors the importance of being ready to meet on time for each session.

Being a tutor can be a satisfying experience for the child. In addition to his or her perceptions of interactions with the learner, the tutor should be regularly informed of the partner's progress toward learning goals. Tell the learner how well he or she is doing. Let the tutor know that you appreciate his or her contributions as a teacher.

For the child being tutored, programs often have a built-in reward system. For a specific answer or series of answers, the tutor will administer a specific reinforcement. The reinforcement may be verbal praise, a star, a piece of candy, or any of a number of items. Some programs provide no guidelines for giving feedback on progress to the child being tutored. The goals and philosophy of the program will contribute to your decision on the structure of the feedback process.

Basic Steps in Developing a Tutoring Program

Once you have developed your goals for a tutoring program and selected the children to participate, the next step is to plan for implementation of the best possible program. Simply stated, the hard part begins. You are not alone in wanting to provide a tutoring program that helps students learn to the greatest possible extent. Many teachers have traveled the ground you are entering, and have provided a wealth of materials and suggestions about developing and implementing tutoring programs. In this section, some of the key considerations in developing tutorials will be explored with a discussion of resources in carrying out a program. Collaboration with teachers will allow for input by school psychologists and other support staff.

Consider the cases of two teachers who decided to begin tutoring programs in their classes. One teacher was very satisfied with the end result, while the other was not. Let's see what happened, then discuss some of the reasons why.

Tutoring in reading: The case of Ms. G.

Not long after becoming a teacher at Johnson Elementary School, Ms. G. noticed that the principal provided strong support for tutoring programs set up by individual teachers. A few of the teachers even coordinated their efforts and reported remarkable gains for their students, along with decreases in problem behaviors following participation in the program. Ms. G. recognized the value of getting

involved in tutoring (after all, the principal seemed to reward teachers who participated) and decided to find out more about how she could become involved in a tutoring program. With the assistance of a school psychologist and another teacher, Ms. G. developed and implemented a plan that involved her children tutoring each other for 20 minutes each day during their English period. Attempting to keep things structured, Ms. G. kept careful records of who was working with whom, what had been covered, and what learning seemed to be occurring. When tutors were not working as expected or were asking for guidance, Ms. G. took the time to train and monitor the tutors in their role. Ms. G. made sure that hte students always had their materials and devoted some time to organizing and completing files of information and lessons for tutors. After a four-week period, Ms. G. evaluated her efforts and the work of ther children. She found that children were working as assigned and were learning. The principal had noted that the program was in progress and was pleased to hear of its success. Ms. G. continued the program throughout the school year.

Tutoring in reading: The case of Mr. S.

As a new teacher to Phillips Junior High School, Mr. S. was impressed by the ease with which other teachers seemed able to conduct their classes and control their students. He had noticed the success of another teacher who had students working in pairs on projects in his area -- Physical Sciences. Knowing a little bit about tutoring, Mr. S. decided that he could get his students to work together and enable him to achieve two goals -- get through the lesson materials and

keep students occupied and out of mischief. When he began his program, Mr. S. chose the best behaved students in his cla-s as tutors and assigned the partners to them from group of "problem" students. Tutors were told that they were in charge of helping their partner learn the daily lesson. No other structure or training was provided for tutors, although Mr. S. spent plenty of time going around the room and telling students to remain on task. After two weeks of his experiment, Mr. S. decided that tutoring was not for him. Students were out-of-seat more than ever, and less work was being done each day.

Comparing success and failure

Clearly, Ms. G. was more successful in developing and implementing a tutoring project than was Mr. S. Not only did Ms. G. work at a school where a principal and teachers had used tutorials successfully, she went about setting up the projecti[illegible] in a manner that ensured success. Mr. S., on the other hand, had few models to follow in the use of peer tutoring and did not use available resources in creating his program. In addition, he did not give much structure to his effort and ignored some basic considerations in working with children. He did not, for example, consider the consequences of matching his students with behavior problems with tutors and expecting these children to complete lessons without disruptions. The contrasts between the two teachers' styles and their success with peer tutoring leads us to a discussion of the critical elements to consider in setting up a tutoring program.

The Elements of Peer Tutoring

Any discussion of tutoring programs that have succeeded will involve one or more of the following elements. Often, the chances for success are increased as the teacher considers and implements these elements into a peer tutoring program:

1. Specifying goals and objectives;
2. Developing a strategy for the assessment of outcomes;
3. Specifying materials and procedures;
4. Training tutors for their roles;
5. Developing a monitoring procedure;
6. Conducting a small-scale program before going all out in your efforts;
7. Considering time and cost factors before beginning.

As we review these elements of successful peer tutoring programs, consider the programs you have helped implement or observed and note how these programs took into account these critical elements.

Specifying Goals and Objectives

Defining your goals involves deciding what you want to gain from a peer tutoring program. You may want the program to free the teacher for other tasks, such as the development of instructional materials. A teacher may be worried about the reading performance of several children in his class and want to increase the skills via tutoring in conjunction with classroom instruction. Whatever your goals, simple or complex, the best time to specify these goals is before you begin to develop any other component of the program.

Here are some goals that teachers have used in setting up tutoring programs:

Teacher A (second grade teacher): "Children will be better able to sound out words that they do not know."

Teacher B (eighth grade teacher in language arts): "Students will improve their proficiency in story writing and criticism."

Teacher C (senior high teacher of mathematics): "Students will appropriately apply mathematical formulas in word problems."

Teacher D (adult education program): "Students will assist each other on small group projects to improve the language and structure of written presentations."

Clearly, the language of goal statements is quite general and by itself does not give you a clear picture of how a tutoring project would be set up to achieve that goal. Many different projects could share a common goal, yet approach the development and implementation of their programs in divergent ways. Goal statements serve as the general structure within which you can develop the specific objectives that you want to implement. Goal statements allow you to communicate with others about what you are trying to do without going into the fine points of your program. Often, goal statements simplify the task of recruiting other staff members who share common concerns for their students and see tutoring as a viable alternative for supplementing instruction.

Developing objectives for a tutoring program is a process that involves translating the intent of goals into observable, behavioral statements. Here are some objectives as examples:

Teacher E (elementary reading class): "After reading a series of paragraphs silently, the student orally states the main idea of each paragraph."

Teacher F (elementary math): "When presented with equations containing fractional addends with line denominators, the student writes the sum of each fraction."

Teacher G (secondary reading): "Given a set of root words, the student attaches a prefix to each root word."

Teacher H (elementary social studies): "When shown pictures of different community helpers, the student describes the job that each community helper performs."

These objectives would be one of the many objectives that would be involved in the projects of these teachers. When they wanted to develop a means of evaluating the attainment of their objectives, the teachers would attach a frequency or numerical-total statement to the objectives and be ready to determine their success in meeting their objectives. For example, Teacher F could state that "when presented with equations containing fractional addends with line denominators, the student correctly writes at least 80% of the sums of each fraction."

Regardless of the lengths to which teachers go to specify their goals and objectives, one principle remains the same: Spending time before tutoring to plan the structure and content of tutoring is time well spent. Too many problems can come up during the implementation of tutoring, so planning ahead of time is to the teacher's advantage.

Developing a Strategy for the Assessment of Outcomes

As has been pointed out above, the development of specific objectives which reflect goals for tutoring leads directly to the development of a statement of evaluation standards. Teacher F considered an 80% success rate in meeting one objective as a minimal standard for successful completion by the learner. Whenever we assess children, whether formally or informally, we are comparing them to standards. When we specify minimal competency standards for our students during tutoring, we are providing the tutors with a goal towards which to work with their partners. The students receiving tutoring are given a target at which they can aim.

The degree to which a supervisor of a tutoring program develops a strategy for assessment can vary quite widely. Mr. Sanders, a teacher who has used tutoring with many students during his career, believes that the best criterion for success is the enjoyment of students with the learning process. Because he matches tutor and learner partly on the basis of their attitudes, Mr. Sanders is sensitive to changes in attitudes and emotions that follow gains in learning during tutoring. By recognizing that tutoring can supplement traditional classroom instruction while increasing student motivation for learning, he is opening up doors to children that they did not know existed.

Mrs. Barnes, who teaches classes in English at the high school level, has used tutoring primarily with a few students who seem to need extra time learning materials. She is careful to match learners

with tutors who will be conscientious and skilled in communicating. On a regular basis, Mrs. Barnes will test the learners to see what gains they may have made during tutorials. She is careful to assess students when they are best ready to show improvement. Tutors are given the responsibility of informing her when their partner is ready to successfully complete unit tests.

In contrast to the above teachers, Mr. Huhn and Mr. Jacobs had implemented a mathematics tutorial program with their junior high classes and were very interested in documenting not only learning during tutoring but any carry-over of this learning into regular classroom activities. Each teacher worked to set goals for the tutors and learners so that they would know how they would be evaluated. During tutor training, the students were instructed on the evaluation standards and were given practice on lesson tests that would be used daily during tutoring. Learners would be tested only on the content of each session, thus providing a steady flow of data on the success of individual tutorial sessions.

Evaluating students on a daily basis is a time-consuming activity. Expenditures of time and (teacher) energy must be considered when determining evaluation standards for tutoring programs. If you are aiming to use tutoring as a means to improve the participation or interaction of students, observing the partners can be a means of evaluation. If you are striving to document learning gains and these learning gains can be reflected in pencil and paper tests, then

by all means use these tests to show student improvement. Information so collected can demonstrate to others that your tutoring program was well worth the effort. School psychologists can provide a valuable service by providing advice on evaluation options.

One final consideration -- many teachers have evaluated not only the learning partner but also tutor both during and following tutoring. While goals and objectives for each partner may differ, you can tailor evaluation standards to meet these variations. Finding that both partners benefit from the tutoring experience is further support for the use of tutorials.

Specifying Materials and Procedures

The decisions made regarding materials and procedures for a tutoring program flow directly from the decisions already made concerning goals, objectives, and evaluation. Goals are the general limits that have been imposed on program efforts. Objectives serve to focus attention on particular types of learning by children, while evaluation standards help to determine whether goals have been met. Materials will reflect the specifics of all of the above areas, and provide content for the tutorial sessions. Taking the time to plan on materials to use during tutorials can involve several people. The planning process can occur before any tutoring starts, allowing the luxury of searching for already made materials or having students help to develop session packets.

One teacher made use of her resources very effectively in developing materials for tutoring sessions. In her junior high classes,

she was assigned groups of children from grades seven eight, and nine. Her ninth graders were working already on an independent basis and were not directly involved in a tutoring effort. They did become involved on a voluntary basis in creating assignments that could be used during tutoring with seventh and eighth graders. The students were a valuable asset additionally because they let the teacher know when too much was being expected during a single session.

Materials that coincide with student expectations of lesson format and demand are readily accepted by students being tutored and do not require additional training of tutors to familiarize them with content. Often teachers introduce games, puzzles, and outside readings to make the tutoring session more lively and fun for all students. Many teachers recognize an important finding from previous research on tutoring -- students learn best when tutoring supplements their ongoing instruction rather than takes its place.

The procedures for presenting materials will reflect the type of tutoring program that you have developed. A program in mathematics and a program in reading will differ in part along the disciplinary lines that each subject area has defined. We expect, for example, certain skills in reading to be taught before others. Our expectations are the same in mathematics. In tutoring, our role in developing procedures is to select the simplest and most direct approach to having tutors present materials to their partners <u>within</u> the confines of the subject matter.

In the following case description, consider how the materials and procedures flow directly from the goals and objectives of the teacher:

Insert Case Description about here

Planning ahead of the tutoring sessions is an important component of the successful use of peer tutoring.

In developing a time line within which to implement tutoring, you will be working generally with predetermined schedules in a school. Many teachers who employ tutoring schedule their sessions to run for the length of grading periods, for academic quarters or semesters, or for specific periods of weeks or class meetings. The length of any single session wi-l run for a portion of the class period. The optimal length of tutoring sessions will increase with the age of the child. Young children (grades 1-3) work best when their sessions last 15 minutes or less. Older children can concentrate and stay on task for periods approaching 30 minutes. Longer periods of time can be used, as long as the teacher monitors the ability of the students to get work done over the entire period.

Deciding where to implement a program raises another set of considerations. The room in which to meet will depend largely on available space. Teachers who work in groups to carry out a program may decide to sue several different locations for tutoring. A good guideline to keep in mind is that once you have told students where to

EXHIBIT I

CASE DESCRIPTION

Marsha is currently a sophomore in high school. She is very outgoing and enthusiastic about extra-curricular school activities. Marsha is not very interested in academic subjects. Until this year Marsha has been a C student but unless her study habits improve, her grades will be lower during this semester. Marsha's teachers describe her as being a very capable student but completely unmotivated. Marsha's strengths lie in the areas of math, art, drama, and home economics. Her English teacher and biology teacher agree that Marsha needs further direction in writing paragraphs since this is a basic unit of any written report. Since Marsha is experiencing problems in interacting with authority figures, the teachers have decided that she would accomplish more by working with someone her own age. Marsha was assigned a tutor who was a junior. The peer tutoring sessions were scheduled for two weeks. During this two-week period, Marsha and her tutor worked daily for forty-five minutes.

General Objectives

1. Marsha will improve the quality of her reading comprehension.
2. Marsha will develop the ability to express herself through the usage of written language.

Specific Objectives

1. After listening to a paragraph, Marsha will express the main idea of the paragraph.
2. Marsha will be able to find the topic sentence of a paragraph.
3. Marsha will write a paragraph that contains a topic sentence and maintains the subject of the paragraph.

Suggested Activities

1. The tutor reads a paragraph from Marsha's biology book, and Marsha states the main idea of the paragraph.
2. Marsha reads aloud and discusses paragraphs from her biology book with her tutor. Marsha underlines the topic sentence of each paragraph.

EXHIBIT I (Cont'd)

3. Marsha reads a series of paragraphs on a worksheet and marks out any sentences that do not fall under the main thought of the paragraph.
4. The tutor gives Marsha a subject such as Disco Dancing and Marsha constructs three topic sentences that could be used to discuss the subject. Marsha will write a paragraph for each topic sentence.

Materials

1. Marsha's biology book
2. Worksheets

EVALUATION

The evaluation will be obtained at the close of the two-week session of peer tutoring.

1. Given a paragraph, Marsha should underline the topic sentence.
2. Given a paragraph, Marsha should delete any sentences that do not follow the main idea of the paragraph.
3. Marsha should compose a paragraph that contains a topic sentence and at least three other sentences.

Adapted from: Ehly, S., & Larsen, S. Peer tutoring for individualized instruction. Boston: Allyn and Bacon, 1980.

meet, keep them scheduled for the same location and time period. The task of getting the children to the assigned location is simplified if the children can take responsibility for getting to their work area.

Within any room, varying numbers of tutoring dyads may be able to work. Even under crowded conditions in which some children are tutoring and others are working on other assignments, children are able to accomplish their tutoring tasks. Monitoring the children will alert you to problems that may arise in the quality and quantity of work being accomplished. When space for tutoring within a room has been established, many teachers find it helpful to designate specific areas as tutoring space, using masking tape or small rugs to highlight the tutoring areas.

Training Tutors for Their Roles

In the next major section, we will discuss in greater detail the training practices that best prepare students for the tutor role. In this section, we will stress the value of training and the effects that such activities can have on the students and teachers involved.

Preparing students for the experience of tutoring can be a matter of simply informing the students of expectations or as complex as meeting the students for a number of sessions to train them in very specific procedures of delivering session content and reinforcement. Regardless of the intent of training, students need to be informed of expectations concerning their involvement in tutoring. The students who will be tutored can be told what they can expect by way of assistance from their partner and from teachers and support staff as they supervise.

the tutoring. In many schools, teachers routinely inform parents of the extra attention that will be devoted to academics via tutoring. When a concerted effort is made to collect and analyze data on tutoring outcomes, parent permission for the involvement of children may be required by the school district.

Defining expectations for the tutors consists of letting them know the roles of staff in helping and supervising them and providing specific instructions for working with partners. Often, teachers and support staff will sit down with their tutor group and go over the content of lessons, answering questions about the materials, and alerting tutors to the best ways to instruct their partners. Teachers who are concerned about the manner in which the partners are praised or corrected may include practice and role playing on these activities during their tutor training sessions.

Mrs. Jensen, who has used tutoring with her sixth graders for a number of years, found that most students selected as tutors were better prepared for their role and less likely to experience problems when she took the time to brief them on her goals for the learning partners and the materials covered in sessions. Usually a small amount of time, no longer than 10 minutes, would be needed to review materials before the tutors met with their partners.

On a larger scale, three other teachers become involved with a project that attempted to document learning gains for both tutor and partner. Tutors were expected to follow specific procedures in delivering content and reinforcing students. Because of these expectations, the

teachers met with tutors for three sessions before tutoring began to review the content of each lesson, the correct answers for exercises, and the procedures for giving feedback to students. To graduate from the training program, the tutors had to show competency in tutorial content and procedures. The time devoted to training had payoffs for those teachers who discovered that their students needed much less monitoring over the course of tutoring sessions. Fewer pairs of children experienced difficulty than during past arrangements of tutoring.

The teacher who is concerned about the time that training takes out of the school day will have to balance the benefits and costs of spending time preparing for and implementing training. Training to any degree usua-ly has the outcome of reducing student anxiety, increasing student success, and ensuring that you are providing the best trained tutor for your situation. Whatever the decision, these considerations can enter into cost-benefit calculations before tutoring begins. Here again, school psychologists can provide guidance in this decision-making process.

Monitoring Implementation

Monitoring documents whether students are using the appropriate instructional materials, and, if so, in what sequence. Observing the tutors on a regular basis will alert you to their use of instructional procedures and their success in completing lesson plans. When either the tutor or the partner is having difficulty mastering the requirements of the tutoring process (either content or process), you can intervene to make changes in the arrangements. Children who are happy working

together, who understand what is required of them, and are willing to cooperate throughout the course of the program are the type of children that you want to see working. Monitoring allows you to support students who are looking for assistance and to reinforce the positive behaviors being shown by tutors and their partners.

Two examples illustrate the importance of monitoring. Sally and John were tutors in Mrs. Blackman's English class. Both students were new in their role and uncertain about portions of their responsibilities. Sally was not sure about many of the responses that she was expected to solicit from the learner, while John was unclear about both the materials and how he was going to get his partner to learn. Both children decided to work with their partner before asking for help from Mrs. Blackman. Sally immediately became bogged down in the mechanics of tutoring, and realized that she needed guidance from the teacher. By asking for help, Sally and Mrs. Blackman were able to identify exactly where Sally needed information on lesson content. Unfortunately, the teacher did not monitor other tutors on a regular basis, so John's difficulties and discomfort in the tutoring role did not surface until his partner complained that she was not learning anything during tutoring, and furthermore, that she knew more about the lessons than John did.

A tutoring program designed for an adult education program illustrates the value of monitoring and the efficiency of establishing this component of a program. In a center which employed tutoring of students interested in supplementary instruction, project staff provided tutors with rating sheets that allowed them to note both

their reactions to the tutoring sessions and their perceptions of their partner's learning. On a regular basis, tutors met with the staff to discuss ratings and to receive feedback on their performance. On occasion, videotaping of sessions was completed so that tutors could monitor their own performance in their role. As a final program feature, the tutoring partners were able to give their reactions to their tutor on a rating form that program staff read. Comments were confidential but allowed project staff to more closely monitor tutoring pairs that were experiencing problems in working together. The monitoring arrangements were preferred by staff because very few dyads required direct observation of their working arrangements. Ratings by participants served as the bulk of the feedback used to monitor students.

Monitoring can be as direct as peering over children's shoulders as they go through materials or as complicated as filling out forms to note the presence or absence of specific behaviors. Some of the questions that can be addressed during monitoring are posted below, while target behaviors for monitoring follow.

Insert Monitoring Forms 1 and 2 about here

Pilot Projects Whenever Possible

Many teachers may be unfamiliar with the term "pilot project" or uncertain that use of such a project would make sense for a small-scale tutoring program. The use of pilot efforts is usually associated with major projects, funded for millions of dollars, that attempt to discover the best method among several for achieving some research goal. Pilot projects can be the prelude to more precise and developed program

EXHIBIT 2

TEACHER MONITORING FORM

Tutor _____ Date of Observation _____

Partner _____

Lesson Preparation

1. Had the tutor prepared material for the session? _____
2. Did the tutor have the necessary material for the lesson available? _____

Lesson Presentation

1. What was the objective of the lesson? _____
2. What activities did the tutor use? _____
3. What materials were used by the tutor? _____
4. Did the materials relate to the partner's classroom lessons? _____
5. How did the tutor handle the materials? _____
6. What type of directions were given by the tutor? _____
7. Did the tutor actively involve the partner in the lesson? If so, how? _____
8. What type of reinforcement was used by the tutor? _____
9. How frequently did the tutor reinforce the partner during the session? _____
10. What type of work skills were exhibited by the partner? _____
11. How did the partner respond to the session? _____
12. What kind of relationship did the tutor and partner appear to have? _____

Adapted from: Laffey, J., & Perkins, P. Teacher orientation handbook. Washington, D.C.: National Reading Center Foundation. (ERIC Document Reproduction No. 068-460)

EXHIBIT 3

TEACHER MONITORING FORM

Tutor _____ Date of Observation _____

Partner _____

Note percent of time behavior is evident:

	0%	25%	50%	75%	100%
1. The tutor was prepared for the lesson.					
2. The tutor had the necessary materials available.					
3. The tutor demonstrated acceptable knowledge of basic concepts being taught.					
4. The tutor gave clear directions.					
5. The tutor used positive reinforcement.					
6. The tutor used negative reinforcement.					
7. The tutor used frequent reinforcement.					
8. The tutor maintained eye contact with the partner.					
9. The tutor actively involved the partner in the lesson.					
10. The tutor was enthusiastic.					
11. The tutor kept the partner on task.					
12. The partner appeared interested during the session.					
13. The partner attempted to perform lesson tasks.					
14. The partner completed lesson assignments.					

efforts. Whenever possible, teachers can be encouraged to adopt an attitude that their efforts at developing a successful tutoring program be considered trial runs. Any conclusions and findings, successes or failures, should be viewed as feedback to shape future efforts involving tutoring as a classroom strategy. Followup efforts can consist of creating new materials, strategies, and structure so that tutors and their partners can work more effectively and efficiently.

Mr. Nobles, a high school teacher, had decided on using some of his more advanced students as tutors for students behaind in their assignments. He maintained records of student performance as a regular part of his grading, and during his tutoring program also kept records of the materials used by his tutors and the logs that they turned in following each week. By looking over these materials and observing the students working, he was able to determine why some pairs were working better than others. The sucessful tutors were giving consistent praise about 50% of the time for successes and criticism rather than specific feedback for errors. Based on his observations and review of materials, Mr. Nobles modified his tutoring program to give all tutors training in content delivery and reinforcement, and had tutors use a rating form to check how well they were following guidelines during every session.

While testing out materials and procedures can be of value for the individual teacher beginning tutoring, pilot projects are of central importance in setting up and implementing programs that involve several teachers and classrooms. In the case of one junior high,

the principal worked with department heads to set some limits on a trial effort in tutoring. According to the principal, teachers could set up a multi-classroom program as long as it did not interfere with prior scheduling, didn't result in hall disruptions, and did not expend funds above those already budgeted. The department heads worked with the teachers, who decided to implement a small-scale program with a select group of students (primarily using advanced students as tutors and matching them with children well behind in their work). Program objectives included proving to the principal that a tutoring program could be implemented without any disruptions in the schedule or the budget. Teachers worked hard to train their tutors in session content and procedures. With the school psychologist's input, large gains in learning were documented. After one quarter of the program, the principal allocated monies for the expansion of the program. The larger effort incorporated the positive features of the earlier effort while eliminating problem areas in content and structure.

Use of pilot programs reflects the attitude that it is better to learn from one's successes and failures than to abandon a lot of hard work.

Time and Cost Considerations

In setting up a peer tutoring program, the time necessary to develop and implement activities as well as the costs associated with these activities need to be considered in light of the probable outcomes for the participants. More specifically, those setting up the program must examine goals and objectives in terms of the financial and

human energy costs associated with any proposed effort. The teacher who intends to pair students within a single classroom may not have to go through a long or involved calculation to decide whether the effort in getting a project going is worth the derived benefits. The developer of a small project, especially one who has implemented many of the guidelines considered earlier, can monitor the time it takes to develop materials, make copies, create learning packets, train and supervise tutors, select students, pair them, and all the other activities associated with getting started. Any financial strains on an already limited budget can result in a teacher relying on personal funds for materials. The practice of dipping into personal funds may seem justified in light of a teacher's commitment to a tutoring program, but can justifiably raise objections from other educators who see the school budget as a more suitable source of instructional dollars.

To balance time and cost considerations with outcomes for large scale projects can be in itself quite time consuming. Groups of educators interested in joint tutorial programs can find use for a program coordinator chosen from their ranks and given the responsibility of allocating staff and student resources, verifying schedules, and finding materials. Rather than burden a coordinator with all aspects of a large project, many groups of teachers work with that person to streamline practices and monitor every aspect of the program's operation.

One group of teachers in an elementary school conceived of a whole school project in tutoring, in which every student experienced the tutor and the learner roles during the school week. The principal

was a strong supporter of the program and wanted it to serve as a model for other elementary schools in the district. As a result, a great deal of time and effort was devoted to ironing out potential problems with the program before any students met for tutoring. Daily operations were under the watchful eyes of the principal and each teacher, who similarly wanted the project to succeed. The project was considered a success by the faculty and the parents of the students. Learning objectives were met or exceeded, and students overwhelmingly reported that they enjoyed the project and wanted it to continue.

When a tally was made of the expenditures on materials for the tutoring sessions, the total cost was well within the boundaries set by the school's available monies. A tally of the amount of hours devoted by the staff to the project revealed a great deal of time spent on the project instead of on other activities. Each teacher, on the average, spent five hours per week involved in project activities, including the development of materials, team meetings, and supervision. The staff believed that the time was well-spent, but agreed that future efforts would probably make better use of their time.

Starting up a program can waste a great deal of time and energy. By carefully noting what works well and what doesn't in a project and by being objective about successes and failures, groups of teachers and support staff can build on their experiences in future efforts. Packets of materials can be made and used several times before new ones have to be developed. Greater efficiencies in use of time and money

can enable a program to continue with administration support during subsequent years of a project.

Where to Turn for Help

Persons interested in beginning a program and wanting to implement the critical elements of successful tutoring as the program is developed can feel overwhelmed by the number of decisions to make before and during tutoring activities. Because of the complexity of the tutoring process, we recommend that the teacher rely on existing and available resources in and out of the school as development and implementation plans are made. The school psychologist can assist the teacher in locating support persons and materials. Four identifiable resource groups in any school are other educators, parents, community representatives, and children.

Support From Administrators and Teachers

The building administrator is the person in most instances that is best able to provide material support for a tutoring program. In many schools, the principal insists on being informed on projects or activities that differ from those traditionally offered. Informing the principal of your interests in tutoring and your desire to start a program may elicit suggestions on how best to find materials for the program or even a commitment to help in any way possible with space and scheduling. Turning to the principal for assistance can be good politics, making that person aware of your interests as well as recognizing that he or she has something to contribute to the success of the project.

Teachers or support staff wishing to join with colleagues to implement a large scale project or conducting research on outcomes, will need to work closely with the principal to explore issues such as parental permission, money for materials, scheduling of meetings, and changes in the flow of students and staff within the building. The principal may be a good intermediary with the central administration to locate supplementary funds or to alert staff about small grants which could be used for project efforts.

Colleagues are resources for several other aspects of the tutoring program. Many may have been involved in setting up tutoring and have access to materials or suggestions on structure, selecting students, and training. Others know teachers with materials readily adapted to tutorials. Others still may want to work closely with you to help you in your efforts or to join with you in a cooperative project. In whatever way that they contribute, your colleagues will be your most valued resource during the developmental and implementation stages. By letting others know what you are doing and by requesting their help, you may attract enough help to ease demands on your time and energy.

Support From Parents

As noted earlier, parents are often informed of peer tutoring efforts regardless of the scope of the program. Many parents appreciate feedback on the learning experiences of their children and will come forward to volunteer their time and efforts with or without solicitation. Organized groups of parents, such as the PTA and PTO,

like to recognize and support innovative educational efforts and can offer concrete assistance in the form of materials and volunteers to aid you in your project. Tutoring can be used as a means to draw parents into the classroom to help in activities such as developing materials, putting these in packets, filling out observation forms, or any number of tasks that would otherwise require your time. Teachers throughout the country have successfully used parents in their tutoring programs as support staff. Still other programs have used parents as tutors, an activity outside the scope of this book.

Support From Community Representatives

There are many groups within the community that have a strong interest in supporting school programs with money, materials, or volunteer help. Mental health centers and community service agencies often receive offers of material and volunteer support and can refer interested parties to schools to assist in projects. Business and industry in many communities have materials that are educational in nature and can be readily adapted to tutorial content. On occasion, corporate groups will provide financial support for educational projects that are new or innovative. One school system joines with a business to develop a tutorial program that had a career education focus. The publicity department of this business provided a wealth of materials stressing themes within career education. Church groups and professional organizations are other resources that can be tapped in support of a school tutorial program.

Support From Children

Children are a very visible resource located within every school. Not only can they participate directly in tutoring as either tutor or learner, but children can help to develop materials, serve as monitors, pass out assignments, and perform other duties as aides. Some schools give students academic credit for services as classroom aides. In one elementary school, the materials used in the tutoring program came from newspaper and magazine clippings that students brought from home. The teacher used these materials to create lesson plans that were not only colorful but interesting to the children. Everyone got involved in the program and felt that it was a successful experience.

The options available to the person interested in starting a tutoring program do not stop here. Several educational publishers have developed materials specifically for tutoring programs. By consulting catalogs provided by publishers, you may find materials tailor-made for classroom tutorials.

Final Considerations

In addition to the considerations that we have raised on elements of a successful tutoring program, there are three other issues that might arise as you plan a program. These issues arise according to the characteristics of your classroom situation and your available resources. We discuss the use of paid versus volunteer tutors, same-age versus cross-age programs, and variations in the length of programs.

Paid Versus Volunteer Tutors

In the past when large-scale tutoring programs were supported by federal funds, monies often were designated for payment of tutors. The programs were intended in some instances as much to support learning by the tutorial partner as to provide employment for the tutor. The typical teacher does not have the resources of the federal government and may be unwilling to provide tutors with a small salary. Many teachers will, however, provide other rewards for their tutors, such as parties and special privileges. Some school districts do have the financial resources to provide a token salary to tutors. Efforts to secure compensation through a school district can lead to a larger pool of tutors volunteering to work for pay in your program.

In most cases, the tutors will be volunteers who are not paid for their involvement. The child who sees tutoring as a truly voluntary act is to be preferred to the child who volunteers out of assumed or actual pressures from others.

Same-Age Versus Cross-Age Programs

The large majority of reported studies of peer tutoring have been on cross-age programs, that is, tutorials in which the tutor is older and at a higher grade level than the partner. The number of instances of cross-age tutoring programs is not unexpected. We associate age with ability to deal with the content and structure of tutoring. When programs involve teachers and students from several classes, cross-age tutoring will occur commonly as an outgrowth of matching knowledgeable tutors with partners who need academic assistance.

In the single classroom with a teacher wanting to implement tutoring, cross-age tutoring is seldom realistic unless children are recruited from outside of the class for the tutor role. The few studies that have examined outcomes of same-age tutorials have found that children at the same age or grade level can learn effectively by peer tutoring. Attempts to compare the relative effectiveness of same-age and cross-age programs have shown that children under some circumstances will learn more with an older partner than with a same-age one. Research on the use of same-age versus cross-age tutors is by no means complete or definitive in this verdict. Any teacher who has attempted a tutoring program will report that same-age programs can work given consideration of the the basic elements of successful tutoring.

Cross-age programs offer some advantages to the teacher. Tutors can be easier to train and are often more likely to be responsible. In contrast, same-age programs offer the advantage of allowing the teacher closer monitoring of student efforts and greater leverage in getting tutors to follow through on their responsibilities. Children from one class are already available, while cross-age tutors have to be recruited. The developer of tutoring programs will have to weigh the relative advantages of using older or same-age tutors in light of available pupil resources and program objectives.

The Length of Programs

Tutoring programs have been implemented for periods as short as a week and as long as several years. The length of a program will be

determined by goals for the program and the time and energy available from children and adults. If goals include increasing reading scores on a standardized test, a program will do little good if it lasts for only a few sessions. Clearly, large gains in academic performance take time, and may necessitate running a program for significant portions of the school year. If your intention is to get students working together without disruption, your program can run as long as it takes for students to work cooperatively.

The amount of time, energy, and materials required for the development and implementation of a program places restraints on the length of a program. Not only should your time and energy be a consideration, but the demands on students must be considered. Students only may be available for brief periods of time during one semester and totally involved in coursework during another. The availability of students as tutors and as learners will affect your planning. The cost of materials can influence the extent of your program especially when such costs are high. Without support from supplementary funds, many small programs have been curtailed until additional monies could be found.

Teachers, school psychologists, and other support persons will face many considerations in using peer tutorials. The advantages of tutoring must be weighed along with its disadvantages before starting a program. The fact that many teachers use tutoring suggests that these teachers consider the programs worth their students' time.

Preparing Tutors

The importance of training tutors for their role as instructional managers has been stressed in the last section. There we saw that tutor training was a basic consideration requiring pretutorial planning of activities. The emphasis placed on the importance of tutor training will be continued and expanded below. The following will review the general directions that can be taken in training, discuss the goals of training sessions, provide examples of content that could be covered during tutor training, and stress procedures that build in structure to the training and actual tutorial activities. Because tutor training is often overlooked, the psychologists can alert teachers to the importance of such preparation.

Training Considerations

Many teachers who have experienced the value of training tutors for the content of tutorials have recognized that planning for training sessions requires close attention to four elements:

1. Students
2. Scheduling
3. Space
4. Resources (people and material)

As we discuss these four elements, consider the opportunities within the schools you serve for training activities.

Students: Training sessions will be valuable to students in alerting them to the demands that you will be placing on their time and

energies, and will be of value in letting you assess their readiness for their role. The design of a peer tutoring program will determine the length and intensity of training activities. A teacher with few students involved in tutoring will need much less time to spend on training than will the teacher who has large numbers of students working together on a variety of materials. Training sessions can be used to determine whether the students selected as tutors are motivated and prepared for their responsibilities or need more time in preparation before serving in their roles. A child may prove to be a poor candidate for the tutor role by being unwilling or unable to master the interpersonal and content presentation skills needed to serve as an effective tutor. The goals of the training session, as detailed below, provide you with specific areas to assess in terms of the tutor's readiness for his or her role.

Scheduling: "The teacher's lament" is not the name of a popular song but a phrase that describes the lack of time that teachers experience as they attempt to accomplish everything that must be done during the school day. Teachers' schedules are indeed crammed full of meetings with students, parents, administrators, and support staff, allowing precious few moments for the teacher to relax. A teacher committing to a tutoring program will be taking away a few of those moments to engage in planning and tutoring activities. School psychologists can assist teachers to relieve some of the strains associated with structuring peer tutorials.

Complicating scheduling will be the varying periods of free time that students will have to spend on training activities. Again, if the size and scope of the tutoring program is limited, training efforts can be equally limited. As the objectives of the programs and the numbers of students become more numerous, so does the complexity of the training arrangements. Meeting during the school day requires a computer in some schools to find a time slot that does not conflict with academic activities. The strength of the school's commitment to the tutoring program will affect the faculty's willingness to release students for training activities.

Space: Training activities must be conducted in an area that allows simulation of the conditions of the actual tutorial setting. Because students will be handling the materials that they will use and in many instances be role playing tutoring skills, plenty of room may be needed to handle the number of tutors in a program. With more limited space, training can be given to a few tutors at a time. When the objectives of the tutoring program are limited, space requirements will likewise be limited. Meeting with the students before they begin tutoring sessions can be completed in any classroom.

Resources (people and materials): We have already seen that setting up a tutoring program involves the support of colleagues within the school and access to materials to use or adapt for tutoring purposes. Training can involve students going through a "dry run" with the materials, making sure that they know what is required of them as well as checking on their mastery of lesson objectives. When the tutoring

program calls for materials other than lesson sheets, such as textbooks, art supplies, and other items not already located in the classroom, the teacher can be responsible for rounding up sufficient supplies from other teachers and office staff. When these materials are not readily available, either during training or the actual tutoring, the teacher may decide to develop these from items brought in by students or from contributions from other teachers and parents, or seek outside support through existing liaisons with the community (e.g., school psychologists).

During the actual training sessions, other teachers and parents can be involved as monitors of the students, watching them to check on their acquiring the necessary academic and interpersonal skills. Former tutors have been used in similar monitoring activities during the training of new tutors. The importance of monitoring students during training will be stressed throughout this section.

Taken together, close attention to students, scheduling, space, and resources will give the tutor program staff a handle on the mechanics of setting up the training component and allow control of events as training ends and tutoring begins. Consideration of the individual events within a tutoring program is best begun before the events take place. Each event must fit within the overall structure and objectives of the program. Our belief in planning and cohesion of events with objectives holds true for training activities. The success of training can in large part determine the success of the total program.

Goals of the Training Sessions

Anyone desiring to train tutors before sessions begin with the learning partners would benefit from structuring training according the the principles developed by Deterline (1970). Regardless of the complexity of the tutoring or the length of the program, training sessions can insure that the tutors have the ability to accomplish the following:

1. Put the learning partner at ease.
2. Clarify the learning expectation.
3. Show the learner how to verify answers.
4. Direct the learner on response procedures.
5. Provide feedback contingent on responses.
6. Help the partner to verify responses.
7. Avoid punishment.
8. Provide verbal praise when appropriate.
9. Provide tangible rewards when appropriate.
10. On designated problems, evaluate all elements of mastery.

In the nest few pages, we will review each of these tutor-directed tasks, providing examples of how teachers and school psychologists can implement training activities to build necessary skills in tutors.

Skill One: Put the learning partner at ease.

The tutor beginning his or her training as a peer helper will have thoughts about tutoring and expectations for the tutor role. These thoughts and expectations will come from observing other children in

peer helping situations and from seeing how adult teachers work with children. Many tutoring program staff members have been puzzled by the words and actions of their young tutors as they talked with their partners. When queried about the reasons that they were communicating in the voice and tone that they used, the tutors stated that they were talking to their partner in the manner used by their classroom teacher. When students model affective teaching behaviors we will produce tutors who are prepared for their responsibilities. When, however, students model ineffective teaching behaviors (negative reinforcement, snide remarks, etc.), we will need to intervene to train students in more appropriate verbal and nonverbal behaviors.

At the most basic level, preparation of tutors can begin with an explanation of what is expected behavior within the tutor role and what is not expected. Staff can spell out in concrete terms the do's and don'ts of working with a peer partner. Posting rules for behavior or preparing a contract which specifies expectations are some of the ways in which adults can clarify for tutors the behaviors associated with the role.

After specifying expectations, staff can train tutors in the verbal and nonverbal skills required during the entry phase of the tutoring relationship. In programs conducted within a single classroom, the entry phase will not involve acquainting the students with each other, but will immediately focus on having the tutor help the partner to relax so work can begin. The larger program involving several classrooms will require a training component on methods for meeting

learning partners and preparing them for the tutoring experience. All tutors can be alerted to the need to appear friendly and to emphasize the development of positive interpersonal relations before tutoring starts. Tutors can ask their partners about their interests as well as their expectations for the tutoring. Getting to know the partner and providing a transition from the expectations of a classroom to those of the tutoring situation are important parts of the early moments of any tutoring program and thus should be part of tutor skill development during training.

Role playing among the tutors will allow them to practice introductions and explanations that will occur later with their partners. Under the scrutiny of program staff, students can spend as little as one minute practicing their introduction to their partner. After this brief experience, the students can discuss their reactions with the teacher and decide on more comfortable ways in which to initiate sessions. Similarly, brief role plays of the discussion of tutor and learning roles will allow these students to try out their explanations and receive feedback on the clarity of their presentations. By watching students during the role play, staff will be able to verify the tutors' understanding of their role as well as to check on their ability to communicate effectively.

Skill Two: Clarify the learning expectations.

When the tutors sit down to work with their partners, they will be presenting learning materials that match the objectives that you have created for the partners' learning. Every lesson will follow a

format that allows the partner to zero in on the concepts and skills that are important academically. During training you will have the opportunity to clarify your own expectations for the partners by sitting down with the tutors to discuss what will be the short-term and long-term objectives for tutorial learning. Sketching out the requirements of the lessons with the tutor will give you a clear understanding of the learning tasks that you expect to occur as a consequence of tutoring.

In a single classroom, a teacher can meet with tutors to discuss the structure of learning activities. This meeting may well be in conjunction with an interpersonal skills training session. The teacher can alert the tutors to the content of the lesson plans and train them to adopt a teaching stance that permits learning (instead of goofing off!) to occur. Students could practice the best ways to address their partners, the most effective ways to phrase questions and to elicit and record responses. These skills are important ones regardless of the size of the tutoring project.

In a larger project, the staff can help the tutors to become aware of the full extent of the program as well as to clarify exact expectations. In one project, three sessions of thirty minutes duration were devoted to defining, with the tutors, the goals for the project, the learning objectives for each of the partners, and the instructional approach to follow during tutoring. Tutors were required to role play tutoring activities at least twice and to be observed during the second session for mastery of basic tutor behaviors. Targeted behaviors were

looking at the partner when talking, speaking in a clear voice, speaking in a positive tone, and asking the monitor for help when in need of assistance. Previous experience without tutor training allowed the staff to make comparisons between tutoring with training and tutoring without training. All staff members agreed that training was essential and should be an integral part of the program.

Exhibit 3, which contains sample behaviors to monitor during tutoring, can be used during tutor training. By monitoring the progress of the tutors during training and their final skill levels, you will have a good idea of the strengths of children before they enter tutoring with a partner. There is nothing to be lost by having children repeat portions of the training process until they have mastered the skills you consider important. Some children may never acquire the skills you consider to be essential and thus can be removed from consideration as potential tutors. Some teachers use children who do not meet tutor expectations as aides during daily sessions.

Effective training will focus on the expectations for tutors and partners and will monitor the acquisition by tutors of required skills.

Skill Three: Show the learner how to verify answers.

Depending on the structure of individual tutoring sessions, the tutor will be expected to provide guidance to the learner, directing that child towards correct answers. When the tutor is asked to inform the student of the correct answer once that student has solved problems (or otherwise finished with materials), training can insure that the

tutor is familiar with the correct solution of content activities. Training requires practice working with session content and quizzing tutors on knowledge of expected responses.

In programs that expect the learning partner to seek out answers on their own, whether or not the answers can be found within the session materials, the tutor has the responsiblity of guiding the learner towards the correct strategy or resources with which to solve problems. In one program, for example, the learners used a workbook that contained exercises developed to meet individual learning objectives. Within the handbook were the answers to each question and problem. Because each learner used different lesson materials for individual sessions, the tutors had to be alert to the placement of correct answers within the handbook, and had to be trained on the procedures for deriving correct answers. Once a child verified his or her answer, the tutor could intervene to provide additional information related to solving the problems more effectively or efficiently, or could provide reinforcement to the partner (see below, Skill Eight).

Training in this skill area involves more than informing the tutor about correct answers (a very important piece of information for the tutor to retain). Familiarity of the tutor with methods of problem-solving and with sources of information on problem-solving also can be content for training sessions when time is available to pursue such skill development. Compare the tutor who can inform his or her partner of the correct answer to a particular problem or question with that of the tutor who is able to inform and direct the partner towards sources

of information or strategies on problem-solving. The first child will satisfy the needs of most teachers but the latter child will exhibit more of the skills of the adult educator.

Acquiring skills in this area will not occur without sufficient time and effort being devoted by the teacher or tutoring project staff to develop, implement, and monitor skill training. While it is not our intent to dictate the specifics of training in this area, we would recommend that information gathered during monitoring of tutor training be considered before releasing tutors for work with peers. One second-grade teacher, who worked with a sixth-grade teaching colleague in setting up tutoring for her students, conducted training for potential tutors. The training focused on interpersonal skills and on these instructional behaviors: (1) familiarity with session materials; (2) ability to introduce materials as outlined in lesson plan; (3) ability to direct partner to correct answers listed in separate sections of learning materials; and (4) ability to assist learner in solving problems when child could not solve problem even with the correct answer. Other skill development occurred during training time, with all children being observed on their interpersonal skills. Their level of success in mastering tutorial activities was noted.

Skill Four: Direct the learner on response procedures.

The skills involved in this area are closely related to those listed under skill area three. While the previous section emphasized the tutor's role in alerting the partner to sources of correct answers, the tutor also could be trained to steer the partner through the procedures necessary for the completion of daily lessons. For example,

the tutor will be expected to assist the partner to use a particular sequence of instructional materials and a definite sequence within any single portion of the lesson. Reduced to behavioral terms, the tutor would tell the partner to take out a specific lesson sheet, activity, or turn to a certain page number and begin to work. Because the partner will be expected to complete certain problems contained on the lesson sheet, the tutor must be prepared to tell the partner which problems to finish and in what sequence. When the partner is expected to complete the activity in a prespecified way, the tutor must be prepared to inform the partner of this and assist that person when necessary for the completion of the activity.

An example of the demands that can be placed on the tutor involves a junior high tutoring program that emphasized the acquisition of mathematical operations' skills. The two teachers involved in the program expected the tutors to know which materials to use during each lesson as well as the procedures to follow in presenting the materials to the partner. While the partner was working on a lesson sheet, the tutor was expected to monitor progress and keep the partner alert to the math operations available to solve particular problems. When the lesson for the day involved a particular operation, the tutor was responsible for informing the partner of the day's emphasis and helping the partner employ that operation in each problem. Rather than merely informing the tutors of daily lesson requirements, the teachers conducted three brief training sessions during which they discussed the

overall objectives for the tutoring, reviewed math facts and operations to be covered, and paired the children to practice the activities. Before each session, the teachers reviewed with the children the emphasis of the daily lesson.

The smallest tutoring program will involve teacher expectations concerning the manner in which materials are introduced and lessons conducted. Larger and more complex programs will carry more involved expectations for instructional activities, both process and product. Training provides the opportunity to pilot procedures, materials, and instructions to insure that the students are capable of meeting expectations. If the tutors cannot handle the expectations, neither will the partners.

A tutoring program that involved eight teachers in an elementary school conducted a dry run of materials and procedures during the second year of the program's operation. Project participants reported much greater satisfaction with the second year's training format than with the first year's policy of meeting with tutors only to discuss correct answers on lesson sheets. The teachers used the training program to refine materials and procedures, elminiating from the actual tutoring sessions any ambiguous procedures and materials that were hard to manipulate or comprehend. Planning for the third year of operations, the teachers agreed to expand the review of materials to include commercially available products advertised for use during tutoring. Training has the potential to go beyond preparing tutors to clarify mathods and materials so that they reflect objectives of the program.

Skill Five: Provide feedback contingent on responses.

The ability to confirm that an answer is correct or that an answer contains errors can be refined during tutor training. Providing feedback that is accurate is very important to the learning of the peer partner. Feedback that is misdirected can only confuse the child. The tutor can err by telling the partner he or she is right when the response is actually incorrect, or can err by informing the partner of an error when that child has given a correct response. To eliminate either form of error, tutors must be familiar with the correct answer for every activity completed by the partner, be able to focus on the activities without their attention wandering, and be able to locate resources when the correct answer is forgotten.

Training the tutor to provide positive and corrective feedback is central to many training programs. Positive feedback, which can include praise (see Skill Eight below), refers to the comments of the tutor which indicate to the learner that a problem or an activity has been completed to the tutor's satisfaction. Comments such as "All right, let's go to the next problem," or "O.K." are usually sufficient to inform the partner that a problem has been solved correctly. The tutor's next decision will involve where to proceed within the lesson. Normally, the partner will continue on to the next problem listed on a lesson sheet. On occasion, the correct completion of an activity can lead to the tutor passing over exercises which cover similar materials and giving the child a new set of activities. The tutor obviously must be informed of and alert to opportunities for procedural variations.

Providing corrective feedback similarly involves the tutor being responsive to the partner's actions and intervening in a predetermined manner. A typical tutor response to error might be "This problem is not correct. Let's see if you can change this part of your answer before completing the rest of the problem." What you want to avoid during tutoring is the tutor giving the partner negative remarks such as "You dummy. How stupid can you get," or similar sentiments. Few children are skilled in providing corrective feedback as we discuss it here. Your goal during training is to provide tutors with a knowledge of and ability to use skills in focusing the learners' attention on errors and leading them toward correct responses.

In one large-scale tutoring project, tutors received training on a very specific series of steps to follow in giving corrective feedback. The tutors were instructed to follow the steps sequentially and not to implement a step without implementing preceding ones. Due to the relative complexity of the feedback procedure, students participated in three 30-minute training sessions which included explanations of the procedures and structured practice in using the tutoring materials. Tutors were able to practice providing feedback as well as to experience how the learner would feel when receiving feedback. By monitoring the actions of the tutors both during training and tutoring, the staff guaranteed that corrective feedback was delivered as planned.

In the simplest of programs, training in this skill area could involve a discussion of and practice in phrases to use when informing

partners how well they have done on each problem. Timing of feedback can be discussed so that tutors intervene when the partner has had ample opportunity to work on a problem, yet has not reached a point of frustration.

Skill Six: Help the partner to verify the response.

Tutor behaviors associated with helping the partner to verify a response parallel those detailed in skill areas three and four. Essentially, the tutor must be directed and trained to await the response of the partner before beginning the process of confirming the answer. Deterline places the initial responsiblity of verifying the response on the child being tutored as this person can benefit from initiating the comparison between the response and the correct answer. More basic than verifying the correctness of the response is the need for the learner to be sure that he or she has answered the question or completed the problem according to the directions of the exercise. A child, for example, who is involved in completing a math exercise can detect errors in addition or subtraction by reviewing individual lesson items before asking the tutor for feedback.

Directing the partner to review each response serves at least two functions: (1) the partner takes the opportunity to monitor his or her own performance, attempting to improve the quality of each answer; and (2) the tutor maintains control on the pace of the tutoring and has time to verify the partner's response before providing feedback. Maintaining control of the learning situation is a skill familiar to

adult teachers, but a puzzle to most children. Taking the opportunity during training to help tutors with control tactics can help them to remain confident with their partner.

Sill Seven: Avoid punishment.

The experienced teacher is aware of the ease with which an adult can become critical rather than helpful when a child makes a mistake in the classroom. The adult teacher after four or more years of college often finds that experience in the classroom is no substitute for being aware of behaviors that are punishing to children. The peer tutor, without training or experience in working with other children, has no perception of the impact of verbal and nonverbal messages on the partner. Training tutors to use positive responses instead of criticism is necessary if the tutors are to be expected to avoid punishing their partners for errors.

One tutoring program involving two teachers and sixty children from a middle school conducted tutor training which stresses methods of verbal and nonverbal feedback that the tutor should use with the partner. Following lecture, discussion, and role playing, the teachers provided the tutors with specific words and phrases to use with the learners: "Very good. You are really doing well. That's right. Try working on this problem from this point. Good try! Let's do this once more." These phrases and many more were contained in a programmed text used to teach the children effective ways to eliminate punishment from the tutoring sessions. Monitoring of the children during use of

programmed text and during role playing gave the teachers many opportunities to model appropriate feedback while correcting the tutors.

Teachers who have not taken the time to train tutors on avoiding punishing responses have noted that peer tutors cannot be expected to use positively-stated feedback with their partner. Emphasis on nonverbal cues that can be punishing is a part of some tutor training efforts. The tutor's posture, the extent to which he or she maintains eye contact with the partner, sighs, or otherwise shows displeasure indicate to the learner a negative perception of performance. Monitoring one's own nonverbal behavior takes training and practice even for adults. Tutoring programs can alert students to nonverbal cues and the tutor's role in monitoring them. Program staff must accurately assess the level at which participating children can be trained in the time frame available. Expecting tutors to monitor verbal nonverbal behaviors without adequately training them is unfair to the children.

Skill Eight: Provide verbal praise when appropriate.

Closely related to the last skill area is training the tutors to provide verbal praise only when appropriate. Your perception of "appropriate" will determine the type and extent of training you initiate. Tutoring programs differ according to the expectations of the tutoring staff for the type and extent of verbal praise. For the majority of tutoring programs, training that focuses on words and phrases that accurately and simply communicate praise will be valuable to tutors. Phrases used to illustrate positive feedback in skill area seven would be applicable here.

In some tutoring programs, especially those that are structured around the use of programmed materials, providing verbal praise at specific points during a lesson is expected of tutors. Given an expectation that tutors provide specific forms of verbal praise at predetermined points, the tutoring staff must spend time training the tutors in the delivery of praise. After a discussion of ways to indicate praise, teachers can give tutors an opportunity to practice and role play the exact behaviors to be implemented during tutorials. An example of a training component which emphasized both style and timing of verbal praise comes from a program at an elementary school. The program was being conducted in cooperation with a university-sponsored research project which was attempting to compare the effectiveness of differing positive feedback statements. Because of the project's goals, tutors in differing portions of the study were given instruction in providing verbal feedback specific to their experimental condition. While structuring of positive feedback to the partner does not only occur during large-scale research efforts, the reader can appreciate the importance of ensuring that the tutors followed predetermined praise strategies in this project. Tutors were monitored throughout the training and portions of the actual tutorials so that praise was delivered according to the project's specifications.

The tutor who applies verbal praise excessively may suffer one of two fates: the partner may begin to ignore praise (some research on adult teachers has shown this to occur) or may become confused as to which parts of his or her responses are correct or incorrect.

Avoiding the occurrence of indiscriminate verbal praise may be as simple as telling tutors to use praise only for correct answers. One teacher with a behavioral orientation provided tutors with tallies of their use of verbal praise. These tallies were products of her monitoring of tutors. Children who had trouble monitoring their own use of praise were given golf tallies to click off each incident of praise. By sensitizing tutors to their use of praise, the teacher helped them to monitor and control its use.

Skill Nine: Provide tangible rewards, when appropriate.

In tutoring programs that involve the use of tangible rewards for performance, the tutor may need training in the presentation of the items used. Providing partners with points, tokens, M&M's, and other manifestations of successful learning occurs in many programs with a behavioral orientation. Many teachers are familiar with the use of tangible rewards within the classroom and are aware that rewards may not have their intended impact unless they are given contingent to certain behaviors. Rewards given too freely or without consideration of the child's actual behavior can only produce less than desired effects. Tutors expected to distribute tangible rewards must be made aware of the importance of following the procedures that have been developed for distributing them.

Practice in administering rewards is important. So is providing the tutors with knowledge necessary to responsibly tally correct responses and to distribute the rewards in a positive manner. The

value of tangible rewards will be lost unless the tutor demonstrates the skills discussed in skill area eight.

The staff member who is selecting tangible rewards for use during tutoring should consider the value of the rewards for the peer partners and the relative ease with which tutors can distribute them. By reviewing any of the literature on the use of reward systems, the reader will find a wealth of information concerning rewards and methods for effectively using them with childrne. Individual learners will respond differently to tangible rewards. The tutoring staff may discover that separate rewards may be needed to motivate individual children. The time and energy required to develop and implement a program of tangible rewards must be balanced against the benefits that the children will derive when motivated to complete learning activities.

Skill Ten: On designated problems, evaluate all elements of mastery.

Deterline, in discussing skills under this category, stresses the importance of probing beyond the answers provided by the learners to find out whether or not children have mastered essential concepts and skills. Strategies by the tutor to probe learning assume that the tutor has mastery of the concepts and skills implicit in the learning tasks.

When the learner has demonstrated that he or she has knowledge of the operations needed to correctly answer problems, the tutor can intervene to check the partner's awareness of the conceptual bases of the problems being presented. In a tutoring lesson that consists of

words to be spelled by the partner, the trained tutor may know that all words in the session follow the same rules of construction. If the learner has successfully spelled initial words in the daily session, the tutor can ask the partner to state the rule or concept underlying the construction of the words already spelled. If the learner answers correctly, the tutor can begin a new series of words.

When the partner has not answered several related items correctly, the tutor may similarly intervene to assess the child's knowledge of concepts and skills necessary for the successful continuation of the session. If knowledge or skills are lacking, the tutor can decide to diverge from session materials to focus on more basic skills needed before the partner can continue.

While few tutoring programs have stressed the evaluation of mastery as part of the training component, those persons interested in using highly skilled tutors will recognize the importance of activities to prepare tutors to evaluate mastery. Tutors prepared to provide mastery feedback and remedial interventions with their partners would indeed be "super tutors," ready to effectively complete the activities of a lesson regardless of the demands placed on them by the partner. Taken in concert with all the skills previously described, the student prepared for mastery evaluation would be an ideal tutor.

Developing and Implementing Training

The decision to train or not to train rests on the shoulders of the staff persons responsible for the tutoring program. In light of our review of tutor training activities, the reader is aware of the advantages

provided by a training component to ensure that tutors act the way intended. The time and materials needed to conduct training may not appear to be available and thus outweigh any advantages to be gained. Similarly, a desire to match only a few children for tutoring may be the level of your interest. Training may appear to be a luxury.

Training has been promoted here as a valuable component of effective tutoring programs. Decisions concerning the content and methods of training will reflect the objectives created for tutoring, as well as the structure that has been built on those objectives. The desire to give tutors the best possible preparation for a tutoring program will determine the shape and intensity of the training provided.

In a cross-age tutoring program conducted in an elementary school, sixth graders were matched with second graders to complete a minimum of 20 sessions stressing reading skill development. The four teachers cooperating on the project decided to train the tutors over three sessions on the following: (1) tutors were introduced to their daily responsibilities. These included maintenance of logs, the number of work sheets to complete, how to solicit help from a monitor, and related matters; (2) the interpersonal skills needed to be an effective tutor were introduced. These included eye contact, a friendly demeanor, a positive vocal tone, avoidance of negative statements, and similar skills. Practice in using these techniques was conducted, then tutors were paired to role play the tutor and the learner roles. Feedback on performance was provided by the teachers; (3) the content of the daily lessons was reviewed. Tutors were given a detailed presentation on the

answers accepted as correct and the procedures for correcting errors. This session was structured so that each tutor could be observed handling the materials and making decisions about item correctness.

Before any tutor was released to work with a partner, the teachers made sure that the child succeeded at every stage of the training sessions. Children who had difficulty with particular skills were themselves tutored by teachers. Only two of the tutors were unable to master the training content and were released from further duties. The teachers considered their training program to be a success -- during tutorials, no tutor was unable to fulfill the expectations of the program.

More involved training components have been reported in projects that placed greater expectations on the tutor in terms of managing session structure and content. The few programs that have reported on involved training have generally operated under the premise that training is the only way to ensure that tutors have the prerequisite skills necessary to implement their roles correctly. Staff in secondary school programs may feel less compelled than their elementary school colleagues to emphasize tutor training. Before a decision is made to exclude training, teachers might survey tutor skills before tutoring begins. If target skills are lacking or at lower than desired strengths, training can be held to increase the tutors' abilities. Training cannot be left to chance if the teacher expects tutors to function at optimal levels.

Building on the Training Component

While training composes only a small part of many tutoring programs, tutoring staff have much to gain from implementing training activities. First, training allows you to improve the materials and procedures that have been developed for tutors and their partners. Finding out about the "bugs" in a program before sessions start will give you time to change materials and activities. Tutors may be unable to master the requirements placed on them. Adjusting demands on the tutor and learner may be needed. The partners may be asked to work too hard, too long, or at a difficulty level beyond their ability to succeed. Tutors, through their contact with the materials during role playing activities, can alert you to problems in teaching children at their ability level.

Training also allows staff to monitor the skills of the tutors so that no tutor is paired with a partner until deemed important. Monitoring of children can guarantee quality control. During training, you can maintain quality control by conducting an ongoing assessment of the tutors' skill levels.

Basic to the discussion of training is the issue of structure within the tutoring program. Training that is organized to reflect program's objectives is one element of the structure that gives a peer tutoring program its direction. Training helps to instill in the tutors, their partners, and the overall program your plan for how children should learn. Tutoring programs reflect not only a set of situation-specific objectives but an overall philosophy of education.

Use of tutoring indicates that you believe that children can learn from each other. The manner in which you shape the experiences for the children will allow them to improve academically and socially.

The structure built into the training component will determine the direction taken during tutoring. If tutors receive no training, little can be expected of them in terms of exhibiting specific instructional or interpersonal behaviors. Tutors can be expected to behave in certain ways that you can monitor and evaluate according to their training experiences. The importance of training as a valuable, if not critically important, component of peer tutoring programs cannot be underemphasized.

Implications for Special Educators

The success of peer tutoring has its basis in the modeling that occurs between students in the tutoring dyad. Children model the behaviors of other children in and out of school, whether they are enrolled in a regular academic program (Strain, Cooke, & Apolloni, 1976a) or in a special education program (Strain, Cooke, & Apolloni, 1976b). Children from a very young age focus on the actions of their siblings and peers for indications of acceptable behavior (Argyle, 1976; Cicirelli, 1976). In the classroom peers can have a marked influence on the behavior of any child.

In peer tutoring, the learner follows the actions of the tutor in several areas. First, the learner models the tutor's learning behaviors as the tutor presents materials. For example, in a reading program, the tutor may sound out words that are difficult for the learner. The learner may pattern his responses after those of the tutor and find that this increases his success. As a result, his future behavior is more likely to follow that of the tutor.

There are other aspects of the tutor's behavior that the learner will model if given the opportunity. If the tutor is friendly and helpful, the learner will generally behave in a calm and responsible manner and will remain friendly with the partner. Although research results have not been unanimous on this point, some educators have argued that positive behaviors modeled in peer tutoring will be transferred to the classroom when tutoring is completed.

Many psychologists and educators have noted the success of the peer tutor as a model for other students. Out of the hundreds of tutoring studies done, relatively few have focused on the use of peer tutoring with special students. The student who is well below the normal range of intelligence, who is experiencing severe language and learning disabilities, or who exhibits a range of significant behavioral disorders is not likely to be perceived by teachers as a positive model for other students and will not be selected for tutoring duties. Lack of opportunity for positive involvement with peers can lead to the development of inappropriate social behaviors that effect the educational progress experienced by special students (Peck, Cooke, & Apolloni, 1981). However, existing studies show that special students in both tutor and learner roles can benefit from the peer tutoring experience.

Special Students and Their Needs

Efforts of American educators to serve the academic and affective needs of special students have recently focused on keeping them in the regular classroom for as great a part of the school day as possible. The practice of mainstreaming lets special students receive the remedial attention that can be given by both regular and special education teachers, as well as the attention from peers that will enable them to develop social behaviors appropriate to the regular classroom. Special educators who have worked with self-contained units in the past have reported that students within these confines tend to be

seen by other students as different. With mainstreaming, special students can receive appropriate remedial instruction and yet be among their peers, enabling them to adjust satisfactorily to the regular school program and its demands (Strain & Kerr, 1981).

When the school program includes peer tutoring, special students often are targeted for involvement as learners in the tutoring relationship. Educators who have worked with special students have noted that these children can, in turn, serve as tutors either to younger students or to students with remedial academic needs.

Existing Programs

Teachers and administrators have been working to develop programs that will instill in the tutor a sense of accomplishment for what he has done. Working with this improved image of self, the tutor is more likely to apply himself to academic tasks in the classroom. If the student is a slow learner or has had a great deal of difficulty adjusting to the demands of the classroom, the success of peer tutoring can be very important. The role of tutor is a demanding one. Fulfilling the requirements of this role shows the student that he can accomplish a difficult task successfully. A student in special education is in greater need than many other students of confirmation of self-worth and academic competency. A survey of existing programs seems to suggest that students with a wide range of different academic and affective needs can be successful as peer tutors.

Gartner, Kohler, and Reissman (1971) devoted an entire section of their work on peer tutoring to programs for special children. In a study in California, fifth and sixth grade teachers referred "problem children" to the peer tutoring project. These children, defined as those who had discipline or other behavior problems in the classroom, served as tutors for students who were on a pre-primary level. Tutoring areas were set up in the pre-primary classroom, and tutors were recruited to work with one or more children at a time. These authors reported on other programs organized for children who had been labeled as slow learners by teachers in their schools. A program in Missouri recruited junior high students who were deficient on basic skills to work with elementary school students in the skill areas. The purpose of the program was to help the tutors relearn the basic skills as well as to be more positive about their ability to handle academic materials. A similar project in Nashville used the tutoring program to improve the tutors' self-concepts by involving them in teaching other children. In addition to improving their self-concepts, the students gained proficiency in the content areas, improved in social skills, learned to analyze their learning processes and to apply what they saw to their own learning styles, and improved their attitudes towards school (Gartner, Kohler, & Reissman, 1971).

Galvin and Shoup (1971) have described a project in which special students could help themselves and others through peer tutoring. This project focused on students who had been in the regular classroom

and had begun withdrawing from both peers and teacher, "tuning out" from the rest of the group. They were rarely completing their assignments and thus were placed in special classrooms. Several of the students in these special classrooms were trained as "pupil teachers." While the entire class was working on the program to improve reading, the pupil teachers were successful in helping the other students to increase their reading speed and their reading achievement. Pupil teachers were themselves helped by the program, with their total reading gains improving significantly.

In another program, in which children from regular classrooms assisted children with special learning needs, Evans and Potter (1974) described the training of sixth-graders to work with students who had functional lisps. Twenty-four 6- to 9-years-olds were treated either by a peer tutor or by a speech clinician. Tutors were chosen both with and without histories of previous speech therapy.

Several studies have described projects in which children labeled mentally retarded benefited from peer tutoring, both as tutors and as learners. Engel (1974) and Harrington (1974) reported on two such projects. Engel (1974) described a training program in which trainable students tutored children who functioned at a lower intellectual level or had severe orthopedic or other disabling conditions that prevented them from participating in other public school programs. For one period a day, the students worked individually with their partners on gross and fine motor activities. Some activities emphasized eye-hand coordination and other perceptual skills. Engel noted that

involvement in the training activities helped all participants. The children receiving the aid enjoyed the involvement of the other students. TMR students who were serving as tutors developed greater self-confidence, communication skills, and feelings of self-worth.

Harrington (1974) described a group of trainable mentally retarded students who were designated as supervisors for classmates who had not yet learned a specific academic task. The supervisory responsibility built leadership skills and confidence in the peer supervisor and helped to create a trust relationship between the two students. Once any child had accomplished a task, he was eligible to help other students and become a supervisor also. Because the students' abilities varied widely, a student could be a tutor in several activities and yet receive tutoring in a number of others. Each student was able to work with his strengths and to receive help for weaknesses. Harrington argued that by using this approach, the teacher became the manager of the classroom and could devote more time to observing the tutoring and making recommendations for each child's academic program. The students reported greater enjoyment of the learning process, and the method increased both independence and feelings of self-importance and self-worth for the children who served as peer supervisors.

Wagner and Sternlicht (1975) described a very interesting project in which trainable mentally retarded adolescents in a residential school served as tutors for younger retarded children who were

deficient in dressing and eating skills. The effect of the program on both the tutors and the learners in terms of acquiring and retaining self-maintenance skills was examined. Tutors received extensive training in dressing and eating techniques--a total of 60 hours was devoted to these training activities. The tutors were allotted time to teach dressing and eating skills to their partners over periods of approximately 20 hours per cluster of skills. The children were tutored in dressing skills for a period of 16 days, with 50 to 75 minutes per day devoted to learning activities. Eating skills were taught over a period of 10 days, with 2 hours per day devoted to these activities.

Of special interest in this program was the training that was given to the tutors. This training included both pre-tutorial and inservice orientation. The content of the training program was based on the premise that the learners would best learn from a highly structured and sequential curriculum. The dressing and eating skills were ordered according to their level of difficulty. Before the tutoring started, the students chosen as tutors were given verbal instruction, staff demonstrations, and role-playing activities in tutoring skills. In the tutoring phase, two staff members were present at all times during the interactions between tutor and learner to provide instruction and support. Tutors were given as much opportunity as possible to function independently of staff members, so that their interaction with the learners could be spontaneous and yet in accord with project guidelines.

There was a significant improvement in dressing and eating skills for the younger students who received the tutoring in this project. The authors reported secondary gains; these included an increased ability on the part of the learners to model behaviors of their tutors, and to attend more frequently to people and events in their environment. Inappropriate behaviors began to decrease. The authors report that incidence of restless behavior decreased as the learners became more involved in the tutoring project.

For the tutors, on the other hand, Wagner and Sternlicht (1975) reported no significant gains in terms of social and personal adjustment. They hypothesized that this was due to several factors: (1) the short duration of the program; (2) the institutional setting, which did not require previous self-direction and responsibility; (3) a setting which already provided ample opportunity for socialization so that the tutorial program did not add significantly to a child's total socialization experiences; (4) the possibility that the students chosen as tutors deteriorated in their general well-being during the program, and that this affected the basis for behavioral change, and (5) the possibility that the research instruments did not reflect accurately the behavioral changes brought about by the tutoring program.

The authors did report that the adolescents serving as tutors showed a significant decrease in maladaptive behaviors. The tutors grew more spontaneous in their expression of affection for others.

Tutors increased their ability to make responsible decisions, relying less upon staff members for decision making. The students became more involved in their activities and less likely to become frustrated in working with others. They began to pay more attention to their personal appearance. Some students began to modify their verbal behavior.

Brown, Fenrick, and Klemme (1971) also have reported on a project in which trainable mentally retarded students tutored other, similar students. The project was divided into five major parts, each part contingent upon completion of the content of the previous parts. Aides instructed students in the correct format and content of tutorials, then steadily decreased their involvement with the children until they were working as a pair. The authors described in great detail the specific teaching procedures. The project was a success. Not only did the students acquire the specific skills for completion of each project segment, but they also used these skills to effectively teach other students. One implication of the study is that a teacher may be able to arrange the classroom so that some of the students can assume responsibility for minor teaching activities and free the teacher for more intensive instructional programs. The students were excited by their involvement in this project; simply being engaged in a new and different activity proved exhilarating for them. With a sense of pride, the students reported their involvement to parents, siblings, and teachers.

The programs detailed above have indicated that children with special academic and affective needs can succeed in a tutoring program. Many other projects have supported this finding--that children can assume the responsibility for teaching others in the context of a peer tutoring program. Kane and Alley (1980) and Chiang, Thorpe, and Darch (1980) have conducted recent tutoring studies with learning disabled children, while Lazerson (1980) described a project involving aggressive and withdrawn children. In total, the studies support the feasibility and usefulness of peer tutorials with exceptional students. All students with motivation and minimum level of ability have something to contribute as tutors, whether this be academic or social skills. Involvement in a peer tutoring program oftentimes leads to improved feelings about oneself and one's academic and social abilities. Students can become better able to cope with pressures of the classroom environment.

Implementing a Peer Tutoring Program with Special Students

As with all tutoring programs, teachers involved in creating a peer tutoring program for children with special learning and affective needs must consider the following factors: (1) selection, (2) pairing, (3) training, (4) scheduling, (5) tutoring space, (6) materials, and (7) monitoring.

Because the population to be served includes children with special learning and affective needs, it will be particularly important to structure program procedures so that tutors know exactly what to do

and when. In many programs that have proved successful with special children, tutorial structure has been well specified at the outset. For example, in the study reported by Brown, Fenrick, and Klemme (1971), program procedures were developed before the start of the program so that the students could enter the tutorial session and receive a well-defined collection of content materials. The manner in which materials were delivered to the students was likewise defined. Project staff believed that the tutors, in this instance trainable mentally retarded children, could better assume responsibility for the tutor role if they were given very explicit instructions on how to conduct tutoring activities. As a result, the tutors received extensive training, as well as follow-up after the program began. Wagner and Sternlicht's (1975) program, in which trainable mentally retarded students worked with similar students, also included extensive training activities which emphasized in great detail the nature of the tutoring activities.

Considerations in the selection of students to participate in tutoring may be quite direct. For example, a resource room teacher may decide to implement a tutoring program with all students. Students who exhibit strength in a particular area may be chosen as tutors, with those who are below group levels in that particular skill area participating as learners. Students may be matched on the basis of how well they interact in the classroom. More rigid selection and pairing standards may be developed by the individual

teacher or project manager if they are deemed necessary. If the goal of tutoring is to involve as many students as possible in the program, then all students may be given the opportunity to participate as tutor or learner.

Scheduling of the tutorial pairs should be well defined and made explicit to the students; they should have consistent and clearly specified time periods in which to meet. This may be especially important for students with special learning and affective needs, in that a regular schedule is easy to learn and provides a greater feeling of certainty about the tutorial arrangement.

Teachers who implement a tutorial program with special students can emphasize the physical comfort of the tutorial setting. When students have particular physical handicaps, the space may be arranged so that these handicaps are minimized. For example, when the students involved are in wheelchairs, the meeting space should be quite roomy and free from physical impediments. A good example of an arrangement created to increase the comfort of the participants was observed by the author. In this instance, the students who had physical handicaps had negotiated with their teacher to conduct their tutoring while seated on a rug. The students were quite pleased, and the teacher believed that the comfort of the arrangement helped the tutoring to proceed more smoothly.

Materials used in a peer tutoring program are more likely to be of benefit if they are both individualized and relevant to the needs

of the participants. This is true for all students who receive peer tutoring; for students who have special learning and affective needs, the manner in which the materials are presented is particularly important. In successful programs, the length of lessons has been monitored so that it does not exceed the children's physical and mental comfort. Lesson plans are very structured and provide a great deal of feedback to both the tutor and learner. Materials are presented in a manner which lets staff members readily observe tutorial activities and provide feedback to the praticipants when tutor or learner behavior is not in accordance with program guidelines. Monitoring of the tutorial process is particularly important in a program conducted with special students. The extent to which both tutor and learner receive feedback can influence their performance in meeting their tutorial objectives. The imagination and creativity of the teachers will determine the extent to which the tutoring program meets its objectives. Teachers who are aware of the strengths and limitations of their special students will be better able than other teachers to develop and implement a tutorial program that can meet children's needs.

The Future

Peer tutoring has been attempted with children of a wide range of ages, racial and ethnic backgrounds, and intellectual levels. Peer tutoring programs in the future will need to extend tutorial services to an even wider variety of children in this and other

countries (Wilby, 1979). Research efforts have not been extensive in the vast majority of tutoring programs. More thorough evaluation of existing and future programs will help us learn more about the factors that contribute to the success of peer tutoring. It is important that peer tutoring programs receive the attention from research staff to verify the success of a tutorial process. Future research efforts will be directed towards clarifying the dynamics of the tutorial relationships and how they affect outcomes for students in all academic programs.

Communication among professionals in this area is very important. Needless duplication in research efforts can be avoided if educators take the responsibility to publish their procedures and findings in journals. Much of this sharing has begun already through participation in workshops around the country and at conferences held by both regular and special education organizations. Educators who have developed tutorial programs that emphasize affective and psychomotor objectives are truly pioneers in the field of peer tutoring. Work on tutoring carries with it the responsibility to disseminate program objectives, procedures, and evaluation results to other interested educators. With open communication between professional and lay persons, the process of peer tutoring is likely to become more refined and specific to meeting objectives for the participants. The beneficiaries of this increased attention to the tutorial process will be the students.

Another future direction for the investigation of peer tutoring influences goes beyond the confines of the tutorial relationship. New studies have attempted to investigate the effects of peer tutorial involvement on students in other areas of their academic life. Carry-over effects between tutoring and classroom involvement undoubtedly exist. The extent to which this carry-over is significant to the continued academic and affective growth of the student can be investigated through simple follow-up of tutorial outcomes.

Peer tutoring is a tool which can increase the likelihood of students achieving the learning objectives specified by the teacher. It is one tool among many that are available, but it is a very special tool. It evokes the cooperation of students in helping each other to learn. This is a very special type of learning, a learning that can greatly affect the lives of the participants.

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